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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,280	04/16/2004	Albert-Jan Brouwer		5686

7590  
Albert-Jan Brouwer  
St.-Eustatiusstraat 2  
Delft, 2612 HA  
NETHERLANDS

05/14/2007

EXAMINER

SMITH, JEFFREY S

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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05/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/659,280	<b>Applicant(s)</b> BROUWER, ALBERT-JAN	
	<b>Examiner</b> Jeffrey S. Smith	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The amendments to the drawings, specification, claims and abstract filed in this application have not been entered because they fail to comply with 37 C.F.R. 1.121. Strict compliance with this rule is required. Please refer to the website [www.uspto.gov](http://www.uspto.gov) or contact an agent or attorney registered to practice before the U.S. Patent and Trademark Office for help in prosecuting this application before the Office. A response to this Office action that fails to comply with the requirements of 37 C.F.R. will result in a holding of abandonment of this application.

### ***Requirement For Information***

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

The information is required to complete the background description in the disclosure by documenting the prior art discussed in paragraphs 1-10 of the application.

In response to this requirement, please provide the title, citation and copy of each publication that is a source used for the description of the prior art in the disclosure. For each publication, please provide a concise explanation of that publication's contribution to the description of the prior art.

If the references c and d listed in the disclosure as filed provide this information, then submitting these references in an information disclosure statement satisfies this requirement.

Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

#### ***Information Disclosure Statement***

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, the listing of references in the application as originally filed and in the amendment filed April 16, 2004 is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. In addition to submitting the list in a separate paper, 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in

the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the specification and the amendment have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Specification***

The disclosure is objected to because of the following informalities.

An entire word or phrase should initially be used before it is abbreviated. For example, the first mention of 3D in paragraph 1 should be "three-dimensional (3D)." The first mention of 2D in paragraph 2 should be "two-dimensional (2D)." Similarly the phrases for other abbreviations such as NURBS, CAD and API should be initially used.

The entire citation of a reference should initially be used before an abbreviation is used. For example, in paragraph 5, the "related invention [b]" should initially be identified by citing the title, author, publication name and publication date if it is described in a printed article, or by referring to the U.S. Patent Number, first named

inventor, title and issue date if referring to a patent. The same is true for [c] in paragraph 10 and [d] in paragraph 34.

In the background of the invention, the distinction between the prior art and the invention is blurred. In response to this Office action, please identify which paragraphs of the background section that should be treated as prior art, and which should be treated as describing the invention.

Paragraph 9 discusses obvious features. Do the obvious features also include the features in paragraph 8? Are these features obvious to one of ordinary skill in the art at the time of invention, or are these features intended to be part of the invention? If they are part of the invention, the word "obvious" should be removed.

A brief description of the drawing needs to be added before the detailed description, see 37 C.F.R 1.77(b).

In paragraph 11, the phrase "coordinate vectors for the 2D motion (apparent motion)" is unclear. Why are the words apparent motion in parentheses after the words 2D motion? What is the difference between motion and apparent motion?

In paragraph 41, why are the words "at infinity" and "eigen fields" in quotation marks? What is being quoted?

In paragraph 44, the phrase "a discontinuous boundary detected in the frame buffer (colors)" is unclear. Why is the word colors in parentheses after the words frame buffer? What do colors have to do with the frame buffer?

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the entire phrases for RMR and 3D should be used before the phrases are abbreviated.

The words "standard or customized" renders the claim indefinite. The standard algorithm implies that this claimed element is well known in the prior art. The scope of a custom algorithm is unclear. If the custom algorithm is unknown in the prior art, then the feature that distinguishes the custom algorithm from the prior art should be in the claim. If this motion estimation algorithm is not a novel part of the invention, then the words "standard or customized" should be deleted.

The term "enabling directed adjustment of model parameters" is unclear. The directed adjustment is not mentioned in any other part of the claim. How is the directed adjustment enabled by the global and local matching? What is directing the adjustment? How does the directed adjustment relate to the rest of the claim elements?

The term "hierarchical sequencing of model parameter class refinement when applying said method" is unclear. The hierarchical sequencing is a part of the method, it can't refer to the method when it is part of the definition of the method. What is the

hierarchical sequencing that is being performed? What are the model parameter classes, and how do they relate to the motion vector matching?

The term "reverse mapping" is unclear. Mapping by itself is unclear, what is being mapped to what? Adding the word reverse makes this phrase even more unclear, because reverse is relative to something else. Also, the application of reverse mapping is unrelated to the rest of the claim. What does the reverse mapping have to do with the rendering, matching and sequencing?

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by "Estimating Motion in Image Sequences" by Christoph Stiller et al., IEEE Signal Processing Magazine, July 1999 ("Stiller").

Stiller discloses per frame rendering of a motion vector field given the scene model (figure 2), global and local matching of the rendered motion vector field to the corresponding motion vector field extracted from the video stream via a motion estimation algorithm, thereby enabling directed adjustment of model parameters (figure 3), a hierarchical sequencing of model parameter class refinement when applying said method (section entitled "Hierarchical Motion Models" beginning on page 77), and the



application of reverse mapping to attain approximate values for unrefined model parameter classes (section entitled "Estimation Criteria" beginning on page 79).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS  
May 10, 2007

  
JINGGEWU  
SUPERVISORY PATENT EXAMINER